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ANALYZING THE IMPACT OF STRATEGIC PROCUREMENT PRACTICES ON THE EFFECTIVENESS OF PROCUREMENT FUNCTION IN PUBLIC SECTOR

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Abstract: Strategic procurement, being a part of strategic management, is nowadays not just focused on costs savings, conserving natural environment but also on supporting the organization in realizing its long-term goals. The procurement function is in a critical position to influence an organization's response to concerns about the natural environment. As this being the case, this study focused on "Analyzing the Impact of Strategic Procurement Practices on the Effectiveness of Procurement Function in Public Sector. 'Institutional Sociology Theory' was used to explain the relationship with the study conducted. The study was specifically focused on achieving four objectives but on this article the author was likely to preset one of the objectives which was to determine to what extent procurement practitioners influence green procurement in public procuring entities. The study used a descriptive research method of collecting information by administering a questionnaire to a sample of individuals. The researcher used the purposive sampling technique to obtain the reasonable information. Researcher used a total sample of 60 respondents. The study involved the use of questionnaire and documentary review as the techniques for data collection. The researcher used SPSS to process and analyzes the collected data to obtain a research result, where findings were presented using tables. The major findings of the study showed that there is a lot factors both practically and theoretically which affect strategic procurement practices in most of public sectors in Tanzania, which were; there is no training on strategic issues to public procurement staff; Basing on the focused objectives most of staff lack enough knowledge about the concept of green procurement; Also, there is no national green procurement policy to implement green procurement strategy; Moreover, there is lack of environmental specifications on products offered by suppliers; Never the less, suppliers in public sectors have not well advance in developing environmentally friendly goods and lastly, green products available in the market are associated with high price that go beyond public procurement plan; The study concluded that, it was seen public organizations have not focused on practicing strategic procurement as it was seen there are many factors which hinder the implementation of strategic procurement practices as well as effectiveness of public procurement functions. Thus it was recommended that, the explored factors which affect such implementation should been taken into account by all public sectors in Tanzania.

Key words: Strategic Procurement Practices, Green Procurement, Procurement Function, Strategic Supplier Relationship Management.

I. INTRODUCTION

Strategic procurement, being a part of strategic management, is nowadays and in most developed countries, it is not just focused on costs savings, quality products or timely delivery but also on ensuring the natural environment in which all living things depends on are safe for current and future generation. The public sector needs to ensure effective, sustainable and strategic management of the procurement function. This is vital for economic development and effective service delivery in African countries (Muchaonyerwa, 2014). The procurement function is in a critical position to influence an organization's response to concerns about the natural environment (Zsidisin and Siferd, 2001).

Strategic procurement is essential for competitiveness of procurement function in any organization (Klasa *et al* 2018). Research on the topic of procurement strategies has become increasingly prevalent as the function shifted away from a primarily clerical role to a more strategic one.

1.1 JUSTIFICATION OF THE STUDY

It is the conviction of the researcher that the findings of this study have contributed enormously to the body of knowledge respect to the existing area of the subject. This part of the study has both theoretical and practical contributions. The first theoretical contribution is that the research added on to the growing body knowledge of green procurement by introducing the practice in developing countries as well as providing evidence of voluntary practice where there is no legislation on the same. The second theoretical contribution is that scholars and academicians will also find this study an invaluable source of reference material for future studies in the area as well as for discussions in the field of procurement management.

Practically, the study was invaluable to the management of various public sector organizations in Tanzania insofar as green procurement practices concerned. The results were an eye-opener on the practices, drivers and challenges of green procurement in the public sector. This aided in future adoption of green procurement in other sectors of the economy. Another practical contribution is that other firms wishing to engage in green procurement practices finds this study very useful in terms of the challenges they are bound to face in the process and how to mitigate on such challenges. The recommendations here will guide on how public organizations and other private firms engaging in green procurement can avert the challenges of adopting green procurement practices.

1.2 OBJECTIVES OF THE STUDY

The general objective of the study was to explore the factors affecting strategic procurement practices in public procuring entities. The study was specifically aimed to:

- i. To determine to what extent procurement practitioners influence green procurement practice in public procuring entities.
- ii. To identify at what extent procurement innovation strategy is practiced in public procurement entities.
- iii. To determine whether public procuring entities implement strategic supplier relationship management.
- iv. To find out to what extent procurement portfolio models are used by procurement practitioners in public procuring entities.

II. LITERATURE REVIEW

2.1. Theoretical literature

2.1.1 Institutional sociology theory

This theory is rooted in institutional sociology processes through which firms respond to institutional pressures. The institutional sociology framework emphasizes the importance of regulatory, normative and cognitive factors that affect firms' decisions to adopt a specific organization practice, above and beyond the technical efficiency of the practice. Institutional theory places particular emphasis on legitimating processes and the tendency for institutionalized organizational structures and procedures to be taken for granted, regardless of their efficiency implications (Hoffman & Marc, 2002).

Institutional Sociology theory is relevant to this study as it is related to the importance of adopting green procurement strategy for the ensuring effectiveness of procurement function. Its impact may range from organizational objectives/strategies which may be short term or long term. This theory gives a clear insight of the importance of the government to formulate national green procurement policy, where all public procuring entities will take into consideration the implementation of it in all stages when procuring goods, works or services.

2.1.2 The current status of green procurement practice by procurement practitioners

As early as year 2000, the Government of Hong Kong amended its procurement regulations to require bureau and departments to take into account environmental considerations when procuring goods and services. Specifically, bureau and departments are encouraged to avoid single-use disposable items, and purchase products: With improved recyclability, high recycled content reduced packing and greater durability; with greater energy efficiency; Utilizing clean technology and/or clean fuels; Which result in reduced water consumption; Which emit fewer irritating or toxic substances during installation or use; or Which result in smaller production of toxic substances, or of less toxic substance, upon disposal (Current Government Green Procurement Practice, 2018).

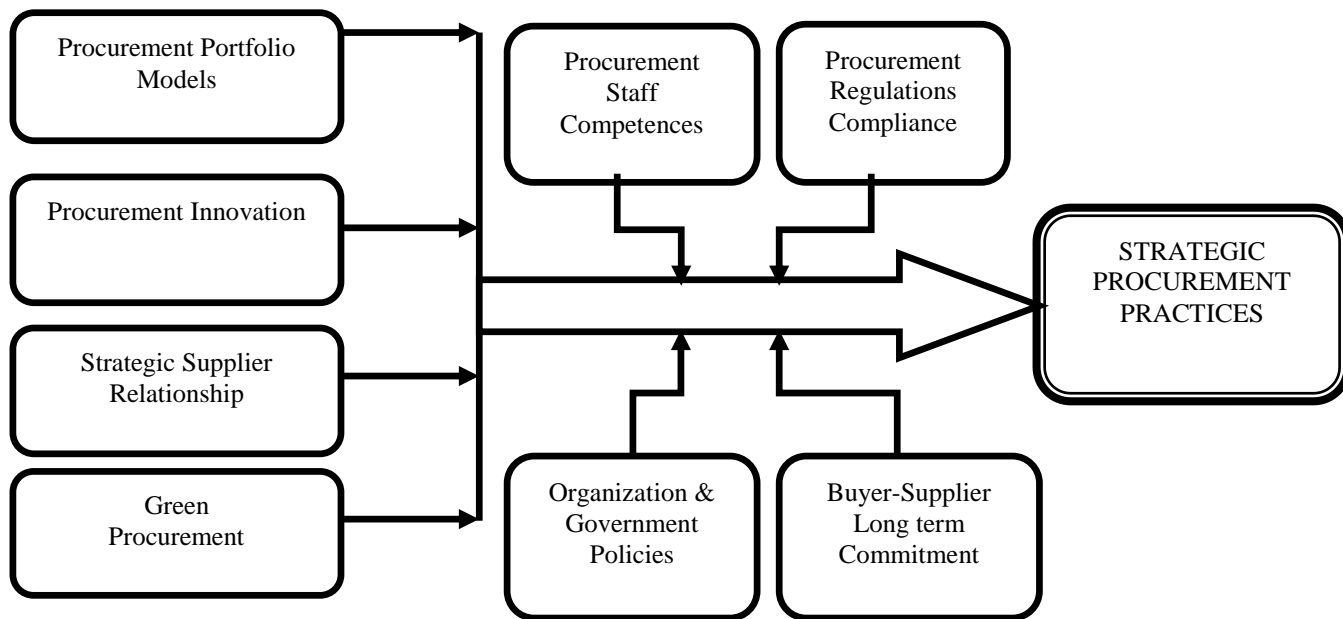
For the purchase of common user items, the Government has adopted green specifications as mandatory requirements in the tender specifications when the items are available on the market with adequate models and quantities in supply. For new green specifications developed with uncertain market availability, the green specifications will be included in the tender specifications as desirable features. Tenderers are invited to indicate in their offers whether their items can comply with these green features and, where appropriate, to submit supporting documents for verification (Current Government Green Procurement Practice, 2018).

The tender assessment panel will evaluate tender offers which can meet the mandatory requirements and recommend either the lowest conforming offer or the highest scoring conforming offer for acceptance. Where there are two or more lowest conforming offers which are identical in all respects, the one which could meet the desirable green specifications could be given the preference (Current Government Green Procurement Practice, 2018).

Through the use of public procurement, a government can craft an operational direction in an economy. By adopting green public procurement, the government encourages its suppliers to think green. This is cascaded down to the other suppliers and firms in the whole chain. Over time, green gets adopted in the entire economy (Omusebe et al, 2017).

Purchasing managers are now in a better position than ever to modify procurement specifications and substitute more environmentally friendly materials (Carter and Carter, 1998). The goods and services procured, and the actions or lack of actions by purchasing professionals, have a direct impact on the natural environment. For example, purchasing personnel have a strong influence on material procured, based on price, quality, delivery, and other criteria. These materials have a direct impact on the characteristics of scrap that is produced, which can subsequently be discarded to waste disposal sites or recycled. Purchasing professionals also influence equipment selection which in turn, impacts energy use, emissions and other facets of production and delivery. Another role that purchasing professionals may have is in regard to investment recovery of scrap materials (Zsidisin and Siferd, 2001).

The study was guided by the following conceptual framework;



Independent
Variables

Intervening Variables

Dependent
Variable

Conceptual Framework
Source: Researcher Model, 2018

From the conceptual framework above, strategic procurement practice is explained by four independent variables, namely: procurement portfolio models; procurement innovation; strategic supplier relationship and green procurement practices. By the means of arrows, these elements of strategic procurement practices are capable of influencing organizational performance through indicators such as realization of the importance on the use of strategic procurement and supply chain models or approaches, the time and cost saving through creativity in performing procurement activities, establishing short and long term relationship with potential suppliers/contractors/service providers and lastly, ensuring that goods and equipment's procured are environmental friendly . In addition, the framework includes policies and other internal organizational factors as the intervening variables which may affect strategic procurement practices in the organization. Most government and organization policies provide a set of guiding principles to help strategic decision making.

2.2 Empirical Review

2.2.1 Green Procurement Practice

A review by Omusebe et al (2017) indicated that, public procurement has the dual effect of bringing environmentally friendly inputs in to the public production process as well as encouraging organizations and individuals in their supply chain to adopt green. This is then cascaded down by the suppliers, compounding the green effect in the economy. The challenge is weather by adopting green procurement practices; public institutions would compromise effective procurement management. Important considerations such as cost effectiveness, timely availability of supplies, high quality inputs among others might be effected by green procurement. In many countries, especially in the developing countries, such considerations take precedence over environmental conservation. It is therefore important to consider the effect of adopting green on these considerations of effective procurement.

A review made by Omusebe, Iravo, Ismail and Wanjohi (2017) on the stakeholder theory, the natural resource base theory, the economic approach theory, the innovation theory, the contingency approach theory and the institutional sociology theory indicated that, adoption of green procurement has an effect on indicators such as cost, quality and lead time, which are all key in procurement management. The effect is either positive or negative in the short and long run. This is important because indicators that enable managers to effectively run the procurement function motivate them to adopt green while those that do not hinder them. In absence of policy directions on green procurement, it becomes impractical for the managers to adopt green, especially when it negatively affects some indicators of procurement management.

Overall, literature indicates that sustainability will continue to be an important business consideration into the future. Procurement managers must rise to the occasion and adopt green procurement as much as the current regulations allow, while lobbying for green procurement policies to be put in place.

There are several studies that shown that consideration of adoption of green as a management practice gives mixed results. A review by Wanjohi, Gachoka, Kihoro and Ogutu (2013), indicated that adoption of green environment can be an innovation that can spur economic growth and hence lead to employment creation. Additionally, Wanjohi (2016) indicated that adoption of green does affect organizational characteristics for well performing organizations. Other studies have shown that adoption of green impacts productivity negatively. A more in-depth study is however needed to establish the exact empirical effect of adoption of green procurement practices on effective procurement management in the public sector.

2.2.2 Knowledge Gap

Compared to other previous studies about green procurement, the author identified that most of the studies provide knowledge based on analyzing different theories while this study provided knowledge based on the fact findings from the field. Also apart from absence of policy directions on green procurement, the study also focused also on green procurement in supplier, buying organization, availability of green products in local market and procurement plan perspectives. Therefore a broad knowledge about what totally affect the implementation of green procurement to ensure the effectiveness of procurement function in public sector is well provided by the study

III. RESEARCH METHODOLOGY

The type of the study was a descriptive research. According to Kombo and Tromp (2006), define that; Descriptive research is the method of collecting information by administering a questionnaire to a sample of individuals. Under this study the researcher prepared or formulated some of the questions related to the topic of the study and submits them to the targeted respondents. This helped the researcher to obtain the first hand data from the respondents, which is more accurate to the study that is undertaken.

This study used a positivistic paradigm which typically assumes a quantitative methodology. Positivism may be seen as an approach to social research that seeks to apply the natural science model of research as the point of departure for investigations of social phenomena and explanations of the social world (Chilisa and Kawulich, 2015). The positivist researcher prefers working with an observable social reality; and such research would produce generalizations similar to those produced by the natural scientists.

This study used two methods to collect data that includes; questionnaire and documentary analysis. The questionnaire which was used on this study was in a form of a likert scale questionnaires. This was so in order to make sure that respondents were not limited in giving their views. Questionnaire is suitable for saving time as compared to other data collecting instruments. Under this study the researcher reviewed documentary sources in order to obtain information and other required data from selected PE's. Data also were collected from various documents including Tanzania procurement journals published by PPRA. The information obtained was used to cross checked against the answers of respondents form questionnaire.

According to Mugenda and Mugenda (2003), the population refers to an entire group of individual's events or objectives having common observable characteristics. The study was conducted at Moshi Municipal Council, Moshi Rural District, Tanzania Coffee Board (TCB), Moshi Urban Water Supply and Sewerage Authority (MUWSA) and Government Procurement Services Agency (GPSA). This study targeted a sample size of 60 respondents(staff) from procurement management unit or procurement department and others from user departments as calculated below:

According to Charan and Biswas (2013), In a Quantitative research study the following formula for computing sample size was used;

$$\text{Sample size} = \frac{Z_{1-\alpha/2}^2 \times (Sd)^2}{d^2}$$

$Z_{1-\alpha/2}$ = Standard normal variate(at 5% type 1 error ($P < 0.05$) it is 1.96 and at 1% type 2 error ($P < 0.01$) it is 2.58)

d = Absolute error/margin error in precision. This was decided by the researcher

Sd = Standard deviation of variable based on previous studies or pilot study

According to Charan and Biswas (2013), in majority of the studies P values are considered significant below 0.05 or 5% hence 1.96 was used as the value of $Z_{1-\alpha/2}$ in the formula and hence $d = 5\%$.

Therefore, Using formula above; Sample Size = $\frac{1.96^2 \times (19.7)^2}{5^2} = 60$ sample size

The researcher selected 3 respondents from each procuring entity a total of 15 staff from PMU; 5 respondents in each PE a total of 25 staff from administrative; 2 respondents in each PE a total of 10 staff from account and finance; 4 respondents of marketing department from TCB and 2 respondents from 3 selected PE's (i.e MMC, MRD and MUWSA) a total of 6 staff from engineering.

The researcher used the purposive sampling technique/method to obtain the reasonable information whereby employed with the major objectives ensuring that the head of the departments and other staff members are involved in the whole issue so as to enable the researcher to obtain the accurate and reasonable information according to (Wiersma and Jurs, 2009), in purposive sampling, the researcher purposely selects individuals who can provide data that are relevant to the research problem.

Data analysis methods employed involved quantitative procedures. Under the study the researcher used SPSS to process and analyzes the collected data to obtain a research result. The data collected were organized into manageable units, that the researcher used descriptive analysis. The study adopted a descriptive analysis by use of questionnaires which were analyzed using tables.

IV. FACT FINDINGS, ANALYSIS AND DISCUSSIONS

In order to identify factors affecting strategic procurement practices in public sector, a number of questions were drawn from the variable, green procurement practice. The results are as presented in table below; (where SD=Strong Disagree, D=Disagree, N= Neither Agree nor Disagree, A=Agree and SA=Strong Agree)

Impact of Green Procurement Practice on the Effectiveness of Procurement Function in Public Sector

Likert Statements	SD%	D %	N %	A %	SA %	Likert Mean	Standard Deviation
There is insufficient knowledge on concept of green procurement strategy	5.0	13.3	25.0	40.0	16.7	2.70	0.944
There is green procurement policy for implementing green procurement strategy	11.7	25.0	48.3	11.7	3.3	2.70	0.944
There is lack of environmental specifications on products offered by suppliers	1.7	11.7	18.3	56.7	11.7	3.65	0.899
Suppliers advance in developing environmentally friendly goods	16.7	30.0	33.3	16.7	3.3	2.60	1.061
Product design specifications provided to suppliers include environmental requirements	16.7	21.7	38.3	20.0	3.3	2.72	1.075
Green products are associated with high price that go beyond procurement plan	3.3	13.3	35.0	26.7	21.7	3.50	1.081
There is lack of top management commitment on green procurement	1.7	13.3	30.0	46.7	8.3	3.47	0.892
There is lack of availability of green products in local market	0	21.7	30.0	35.0	13.3	3.40	0.978
There is lack of financial resources to implement green procurement	1.7	16.7	20.0	46.7	15.0	3.57	0.998

Source: Field data, 2018

As presented in the table above, most of staff under public procuring entities they lack enough knowledge of green procurement since 40% of the respondents agreed with the statement, 25% neither agreed nor disagreed, 17% of the respondents strong agreed, 13% disagree, and only 5% strong disagree. The results of the findings of this objective revealed that, most of the staff under public procurement entities they lack enough knowledge on implementation of sustainable procurement strategy within their organization. As a result all procurement done does not minimize pollution to the environment and does not ensuring healthy society.

According to the findings revealed by the table above it shows that, most of respondents they did not know if there is public green procurement policy since 48% neither agreed nor disagreed with the statement, while 25% disagreed that there is no such policy in public procuring entities in implementing green procurement strategy, 12% of the respondents strong disagreed, 12% again agreed, and the remaining 3% strong agreed with the statement. In Tanzania, most legislation and institutions which are responsible for promoting sustainable environmental conservation and protection have not been effective due to their oversight on environmental impacts of public procurement. Thus, the role of government purchases as a stimulus for sustainable environment and instrument for achieving environmental goals cannot be overemphasized.

The study also found that, most of products offered by suppliers lack environmental specifications since 57% of the respondents agreed with the statement, 18% of the respondents had no opinion, 12% strong agreed, again 12% disagreed above also shows that 30% of the respondents responds that suppliers have not advanced in developing friendly environmental goods, 33% neither agreed nor disagreed, 17% agreed, 17% again strong disagreed with the statement while the remaining 3% strong agreed. The findings also revealed that, local suppliers have not well advanced in technology in developing products which are environmental friendly and most affordable by users, as a result we still have goods which are not environmental friendly in our local market.

The analysis of the findings of the table above shows that, 38% of the respondents had no opinion to the statement but 22% of the respondents disagreed if product specifications from the procuring entity to the supplier include environmental requirements, 17% again strong disagreed, 20% agreed and remaining 3% strong agreed with the statement and 2% of the respondents strong disagreed.

Suppliers of goods to these public procuring entities did not show environmental specifications in their goods offered to buyer, as a result buyer cannot be able direct to identify the positive and negative impacts of those products to the environment and society. Tanzania is one of the developing countries and is associated with importation of many products from abroad. Most of the products are cheapest in nature and materials used for production are not environmental friendly. There are few products in local market which are environmental friendly are associated with high prices that most of public procuring entities cannot afford due to limited budget.

The study findings relate to Srinivas, (2018) who state that, for the purchase of common user items, the government of Hong Kong has adopted green specifications as mandatory requirements in the tender specifications when the items are available on the market with adequate models and quantities in supply. For new green specifications developed with uncertain market availability, the green specifications will be included in the tender specifications as desirable features. Tenderers are invited to indicate in their offers whether their items can comply with these green features and, where appropriate, to submit supporting documents for verification.

Moreover the findings revealed by the table above shows that most of the respondents agreed that there is lack of top management in public procuring entities on green procurement practice since 47% of the respondents agreed with such statement, 30% of the respondents neither agreed nor disagreed, 13% disagreed, 8% strong agreed and lastly 2% of the respondents disagreed.

Hence, commitment on implementation of sustainable public procurement by the people with authority within the country or organization is of very important. Lack of it results to lowering efforts of procurement practitioners to implement green procurement in public organization. Never the less, green procurement practices require enough funds for buying those products, making follow up on implementation and doing some testing or experiments of those procured products to the environment and living things as well, to ascertain the impacts. Most of the respondents agreed that there is lack of availability of green products in local market. Also from the study, most of respondents agreed that there is lack of financial resources to implement green procurement in public procuring entities.

4.1 Hypothesis Testing

Working experience is a good indicator on how to measure the difference between mean scores of the respondents in tackling questions. In case of witnessing the practice of green procurement it seems that there is no difference between likert overall mean scores of 2.590 attained by the respondents although it was not significant related within the group.

H_0 = There is no difference between means of the scores in response towards strategic procurement practices in terms of working experience.

H_1 = There is difference between means of the scores in response towards strategic procurement practices in terms of working experience.

By testing the difference between means of the groups associated with working experience criteria, and green procurement practice was not significant because the p-value is greater than 0.05 ($p > 0.05$) indicating that we have failed to reject the null hypothesis that, there is no significant difference between means of response scores in working experience criteria..

Analysis of variance using parametric test basing on working experience of the respondents

One Way Anova

Factor	Sources of variation	Sum of Squares	degrees of freedom	Mean Square	F-test	P-value
Green Procurement Practice	Between Groups	24.871	18	1.382	1.144	0.349
	Within Groups	49.529	41	1.208		
	Total	74.400	59			

The p-value of 0.349 indicates that we have no evidence to reject the null hypothesis that there is significant difference between likert mean scores of the respondents with different working experience. Hence it shows that all respondents with different working experience (0-5, 6-10, 11-15 and 16 years and above) responded equally in green procurement practice as indicated in the table above.

V. CONCLUSION

It is often difficult to implement policies due to legislative constraints, accounting methods that do not take into account the unique qualities of green products, poor organization design, and poor procurement practices. When implementing green procurement, public sector organizations, are often limited by international and national procurement laws. These regulations do not allow buyers to introduce irrelevant pre-qualifications to contracts. The researcher notes that often times, buyers are concerned that environmental sustainability would be considered an irrelevant pre-qualification.

Finally, green procurement practices can help organizations to achieve cost savings. At a glance, the cost of green procurement may seem to be on the higher side, but considering the savings in materials and energy costs, reduced wastage and pollution, and quality improvement throughout the product lifecycle, significant cost savings could be achieved. Adhering to green procurement practices minimize supply chain risks by avoiding a public relations disaster. Consumers are more conscious about the product they use and their effect on health.

VI. RECOMMENDATIONS

The study prevail that new skills and knowledge on formulating and implementing green procurement strategies is very vital in preserving environment. This will help the government to cut costs on spending against all negative impacts which caused by the pollutants raised by procuring items which are not environmental friendly. To that extent, it is important for public procurement practitioners to be given practical training and seminars focusing on sustainable procurement as well to take into consideration the procuring of green products in their annual organization procurement plan.

Never the less, in order for eco-procurement to be well practiced in public sectors, public organizations have to set a clear budget for facilitating the implementation of sustainable procurement. As it was portrayed by the study financing for and awareness of environmental friendly procurement have been in low level in public procurement, therefore it is important for the government under the responsible ministry to take appropriate actions in all related matters concerning eco-procurement within the country. The study might therefore contribute to new knowledge and hypothesis formulation.

VII. OPTIONAL, NOT BINDING ON THE AUTHORS

7.1 Limitations of the study

There was lack of maximum cooperation from the staff during data collection phase of the study. However the researcher managed to convince employees of the organizations and outsiders on the importance of their contribution to the study and the researcher managed to obtain relevant information that resulted to the attainment of the objectives of the study.

Never the less there was lack of vast of adequate and relevant data since most the employees feared to provide confidential information. However by employed creativity that resulted into innovative techniques when the researcher wrote cover letters to the management that explain the aim and importance of the study. Hence, it helped the researcher to obtain relevant information despite the difficulties.

7.2 Directions for future research

The study was limited to three key strategic issues of strategic procurement practices. There is a need for future research to increase number of the findings and wider coverage of strategic procurement practices. The study could be more valid if other future researcher(s) on the same study could increase the number of sample size of the respondents. Future studies should also focus on whether such green practices translate to value to the private firm. This can be done by performing an analysis of the impact of such practices on firm performance by using a number of performance measures.

7.3 Source of funding of the study

The whole study from proposal preparation up to the completion of the thesis was self-financed by the author.

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